What is claimed is:

1. A mutagenized combinatorial library of Major Histocompatibility Complex (MHC) Class II chimeric proteins displayed on the surfaces of recombinant yeast cells, wherein the mutagenized combinatorial library comprises at least one member MHC Class II protein which is improved in conformational stability or in peptide binding or T cell receptor binding as compared with a comparison MHC Class II protein which has not been mutagenized.

2. The mutagenized combinatorial library of claim 1 wherein the MHC Class II chimeric protein is a chimeric protein, said chimeric protein comprising a portion mediating binding to the surfaces of the recombinant yeast cells and a portion which comprises a peptide binding region of a MHC Class II protein.

3. The mutagenized combinatorial library of claim 2 wherein the portion mediating binding to the surfaces of the recombinant yeast cells is a mating adhesion receptor portion.

4. The mutagenized combinatorial library of claim 3 wherein the mating adhesion receptor portion is an AGA2 portion.

5. The mutagenized combinatorial library of any of claims 2 to 4 wherein the chimeric protein further comprises a portion comprising an amino acid sequence of a peptide which binds to the peptide binding region of the MHC Class II protein.

6. The mutagenized combinatorial library of any of claims 2 to 5 wherein the chimeric protein further comprises a portion derived from a c-myc protein and which mediates binding to a c-myc specific antibody.

7. The mutagenized combinatorial library of any of claims 2 to 6 wherein a peptide which binds to the peptide binding region of the MHC Class II chimeric protein is associated with an autoimmune disease.

8. The mutagenized combinatorial library of claim 6 wherein the autoimmune disease is insulin dependent diabetes mellitus.

9. The mutagenized combinatorial library of claim 8 wherein the peptide binding region specifically binds a peptide having the amino acid sequence given in SEQ ID NO:19, SEQ ID NO:22 or SEQ ID NO:24.

10. The mutagenized combinatorial library of claim 6 wherein said chimeric protein comprises an amino acid sequence as given in SEQ ID NO:17.

11. An isolated mutant MHC Class II chimeric protein, wherein said protein comprises a portion mediating binding to the surfaces of the recombinant yeast cells and a portion which comprises a peptide binding region of a MHC Class II protein and wherein said chimeric protein is improved in stability or in T cell receptor binding as compared with an MHC Class II chimeric protein which is not a mutant chimeric protein.

12. The isolated mutant MHC Class II chimeric protein of claim 11 wherein the chimeric protein further comprises a portion comprising an amino acid sequence of a peptide which binds to the peptide binding region of the MHC Class II protein.

13. The isolated mutant MHC Class II chimeric protein of claim 11 wherein the peptide which binds to

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the peptide binding region of the MHC Class II protein is associated with an autoimmune disease.

14. The isolated mutant MHC Class II chimeric protein of claim 13 wherein the autoimmune disease is insulin dependent diabetes mellitus, and wherein the portion mediating binding to the surfaces of the recombinant yeast cells is a mating adhesion receptor portion.

15. The isolated mutant MHC Class II chimeric protein of claim 11 wherein the peptide binding region specifically binds a peptide having the amino acid sequence given in SEQ ID NO:19, SEQ ID NO:22 or SEQ ID NO:24.

16. The isolated mutant MHC Class II chimeric protein of claim 12 wherein said chimeric protein further comprises a detectable label.

17. The isolated mutant MHC Class II chimeric protein of claim 16 wherein the detectable label is a fluorescent moiety, a chromophore, a radionuclide, a chemiluminescent agent, a magnetic particle, an enzyme, a cofactor, a substrate or a toxin.

18. A method for detection of a lymphocyte having a T cell receptor protein in a biological sample, said method comprising the steps of contacting the sample with an isolated mutant chimeric protein of claim 16, wherein said chimeric protein is complexed to the peptide or wherein the chimeric protein and peptide are covalently bound, wherein said chimeric protein comprises a binding region which specifically binds said T cell receptor protein under conditions which allow the binding of the T cell receptor protein to the chimeric protein, and detecting the chimeric protein bound to the T cell receptor protein.

19. The method of claim 18 wherein the biological sample is cells, a tissue sample, biopsy material or bodily fluids.

20. The method of claim 19 wherein detection of the T cell receptor protein is diagnostic of an autoimmune disease.

21. The method of claim 20 wherein the autoimmune disease is selected from the group consisting of insulin dependent diabetes mellitus, multiple sclerosis, Crohn's disease, celiac disease, rheumatoid arthritis and inflammatory bowel disease.

22. A method for treating or preventing an autoimmune disease in person or animal suffering from or susceptible to said autoimmune disease comprising the step of administering to the patient a therapeutically effective amount of an isolated mutant MHC Class II chimeric protein which is improved in conformational stability as compared with a comparison MHC Class II chimeric protein which is not mutant.

23. The method of claim 22 wherein said autoimmune disease is insulin dependent diabetes mellitus.

24. The method of claim 23 wherein said isolated mutant protein has a portion comprising an amino acid sequence as given in SEQ ID NO:17.

25. The method of claim 24 wherein said mutant protein binds a peptide comprising an amino acid sequence as given in SEQ ID NO:19, SEQ ID NO:22 or SEQ ID NO:24.